

REMARKS

Claims 21-40 are pending.

Claims 21,22,24,26,27 and 38-40 are rejected.

Claims 29-37 are allowed.

Claims 23, 25 and 28 are objected to.

The independent claims are 21, 29, 38.

2. Claims 21, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gummiwerke (GB 867,103, of record) in view of Mechanics of Pneumatic Tires (Page 373, of record). Gummiwerke and Mechanics are applied in the same manner as set forth in the Non-Final Rejection mailed on May 17, 2004.

As best depicted in Figure 1, Gummiwerke discloses a pneumatic tire construction designed to operate more efficiently during an underinflated or runflat condition, wherein said tire includes a wedge insert or stiffener 3 disposed on an inner surface of each sidewall portion. The stiffener of Gummiwerke includes a plurality of intervening circumferential grooves or cuts 9 that separate said stiffener into adjacent segments (reference characters 4-8) that cooperate with one another, wherein the outer surface of a segment and the inner surface of an adjacent segment intersect at a point (segments have the capability of pivoting in an analogous manner to the claimed invention). Gummiwerke, however, is completely silent to the additional features of the tire, particularly the makeup of the carcass. While not expressly depicted by Gummiwerke, the carcass represents a fundamental tire component formed of the primary structural reinforcing elements and one of ordinary skill in the art at the time of the invention would have readily appreciated and expected the tire of Gummiwerke to include a carcass structure. Furthermore, the specific selection of a radial carcass construction would have been obvious to one of ordinary skill in the art at the time of the invention since it represents the most common and well known carcass arrangement used in the manufacture of modern day tires, as shown for example by Mechanics (Page 373).

As to claim 22, Figure 1 of Gummiwerke clearly depicts a saw tooth construction in which the respective surfaces (inner and outer surfaces of the segments) are flat.

With respect to claims 24, the cuts or grooves 9 close during an underinflated or runflat condition (Page 2, Lines 65-70).

Claims 21, 22, and 24 have been cancelled and the rejection is now moot.

3. Claims 26, 27, and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gummiwerke and Mechanics as applied in claims 21 and 29 above and further in view of Kamegawa (JP 3-1 04710, of record). Gummiwerke, Mechanics, and Kamegawa in the same manner as set forth in the Non-Final Rejection mailed on May 17, 2004.

As noted in the previous paragraph, Gummiwerke is directed to a runflat tire construction having a rubber member or stiffener, wherein said stiffener contains a plurality of cuts or grooves that define segments. In describing the tire, Gummiwerke suggests a tubeless tire construction, which is recognized as referring to a tire without an inner tube (Page 2, Lines 9-19). Although Gummiwerke fails to expressly describe an innerliner, it is extremely well known that an innerliner is a fundamental component of tubeless tires and is extensively provided in order to reduce the amount of air in the tire structure (promotes air impermeability). In essence, a tubeless tire contains an innerliner in place of an inner tube to provide the function of limiting the amount of air in the tire structure. One of ordinary skill in the art at the time of the invention would have expected the "tubeless tire" of Gummiwerke to include an innerliner in view of the description as such. Kawabata provides one example of a similar runflat tire construction in which a well-known innerliner is provided. It is noted that the runflat member of Kawabata similarly has grooves or indentations at its axially inner surface- in this instance, the innerliner conforms to the geometry of the runflat member and is existent over the inner and outer surfaces that surround a given indentation. Additionally, one of ordinary skill in the art at the time of the invention would have found it obvious to position the innerliner outward of the runflat member as it is well known in the tire industry to place reinforcing members within the tire cavity. It is emphasized that Gummiwerke only requires that the rubber stiffener is attached to the inside of the sidewalls of a tubeless tire- the rubber stiffeners would provide the same reinforcing capabilities if they were attached to the innerliner or if they were attached to the carcass structure. Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to include an innerliner in the tubeless tire of Gummiwerke and furthermore, would have found it obvious to position the innerliner inwards or outwards of the rubber stiffener as each construction defines well known arrangement in the tire industry.

Claims 26 and 27 now depend upon allowable claim 25 and are now allowable.

Allowable Subject Matter

4. Claims 29-37 are allowed. The following is an examiner's statement of reasons for allowance: the prior art references of record failed to suggest, disclose, or teach the inclusion of saw-tooth shaped stiffening member in a tire structure, wherein the surfaces that define the saw-tooth assembly are non-flat.

5. Claims 23, 25, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 23, 25, and 28 have been rewritten in independent form including all of the limitations of the base claim and any intervening claims. Therefore, these claims are allowable.

Response to Arguments

6. Applicant's arguments filed September 9, 2004 have been fully considered but

they are not persuasive. It is initially noted that the rejections of claims 23, 25, and 28-37 have been withdrawn in light of applicant's arguments (Pages 10-11). As to the additional arguments, applicant contends that the stiffener of Gummiwerke is divided into individual ribs as opposed to that of the claimed invention in which the stiffener is one piece. It is the examiner's position that the cut or divided stiffener of Gummiwerke is analogous to that of the claimed invention since the respective ribs are described as cooperating with one another. A fair reading of Gummiwerke suggests that the cuts extend through the thickness of the stiffener and intersect at the axially outer surface, this intersection representing the hinge point. As acknowledged by applicant, the length of the surfaces (defined by the cuts) can extend the thickness of the insert or less as desired. It is not believed that the description of a "single circumferentially disposed" insert excludes the intersection of the cuts at the axially outer surface of the insert or stiffener. In fact, dependent claim 28 is intended to further limit the generic structure of claim 21, such that the description of cuts extending less than the thickness of the insert further defines the generic structure of claim 21. It is further noted that the claims are directed to a tire article and after vulcanization, adjacent portions of the cut or divided ribs would be expected to form an integrated structure due to flow of the rubber during vulcanization.

As to the inclusion of an inner liner, Gummiwerke describes a tubeless tire construction, which is predominantly recognized in the tire industry as defining a tire having an inner liner as opposed to an inner tube. One of ordinary skill in the art at the time of the invention would have readily appreciated the placement of the inner liner inward of or outward of the reinforcement member. Kamegawa provides one example of a similar tire construction in which an innerliner is disposed inward of the reinforcing member, it being recognized that either placement of the inner liner would have been well within the purview of one of ordinary skill in the art at the time of the invention absent any conclusive showing of unexpected results.

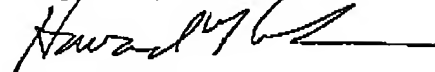
After this amendment, the remaining claims 23, and 25-37 are allowable.

The independent claims are 23,25,28 and 29.

Conclusion

Favorable examination and consideration are respectfully requested.

Respectfully submitted,



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